

acus, but the size of the eyes and the form of the thorax are very different. I retain for it the name which appears in Dejean's Catalogue.

Nemicelus marginipennis, linearis, valde elongatus et depressus, pallide testaceus nitidus, capite cum oculis magnis thorace latiore, hoc latitudine fere duplo longiore, lateribus antice rotundatis, postice subsinuatis, pone medium angustato, disco punctulato, fovea utrinque prope basin profunda impresso, elytris punctulatis vix striatis, margine laterali nigricante, apice truncatis. Long. .20.

Georgia. The antennæ are longer than the head and thorax, with turbinate joints, gradually increasing in size; the first joint is thickened, and is longer than the two following united. The last joint of the maxillary palpi is larger than the penultimate and apparently acute at tip. The angles of the thorax are all rounded; the posterior foveæ are oblong, slightly oblique, and about as far from the sides as from the base.

Notice of some Coleopterous Insects, from the Collections of the Mexican Boundary Commission.

BY JOHN L. LE CONTE, M. D.

This paper includes descriptions of some new species contained in collections received from the Boundary Commission immediately before the completion of the survey, and with the collections previously made by the active and enterprising naturalists attached to the expedition, will enable a moderately full Coleopterous Fauna of the lower Rio Grande to be prepared.

Of the species noted below, some were collected between Laredo and Ringgold barracks, by Messrs. Schott and Weise, under the command of Major Emory. Those from Frontera, Rio Grande, were collected by Mr. J. D. Clark, under Major Graham: a few others were obtained by Mr. Clark at San Antonio, in Texas. Some very interesting species from Fort Union, New Mexico, collected by Major Sibley, are also added, although not belonging properly to the Boundary fauna: and one from Dr. Cooper's collection in Oregon, which was omitted in my description of his species.

Cicindela punctulata and *albopicta*. Frontera; Mr. Clark.

Cicindela 16-punctata Klug. Jahrb. 32. Frontera; Mr. Clark. This species resembles very closely *C. hentzii*, nor does there appear in Klug's description any character which would separate it from that species. The law of representative forms is abundantly exemplified in the species of this genus, and much careful investigation will be necessary to determine what are well defined limits of the species.

C. blanda? A species closely resembling this was also found by Mr. Clark at Frontera.

Pasimachus costifer, niger, nitidus; thoracis elytris que marginibus cyaneis, illo postice angustato, lateribus postice sinuatis angulis posticis rectis, his modice convexis, lævibus, carina humerali postice obsolete continuata, costaque submarginali acuta utrinque paulo abbreviata ornatis: antennarum articulis 2 et 3 compressis. Long 1.05—1.2.

Dr. Weise, Laredo to Ringgold Barracks. This species has the same form as *P. depressus* and punctulatus, but the sharply elevated costa between the margin and the obsoletely prolonged humeral carina will readily distinguish it. The mandibles are slightly rugous.

Harpalus impiger, niger, nitidus, elongatus, thorace latitudine paulo breviori, paulo convexo, postice angustato, lateribus rotundatis, anguste marginatis, basi submarginata punctulata, utrinque subimpressa, angulis posticis obtusis non rotundatis, elytris thorace vix latioribus, profunde striatis, unipunctatis, apice sinuatis, antennis palpis pedibusque ferrugineis. Long. .52—.65.

Santa Fe, New Mexico, Mr. Fendler: Frontera, Mr. Clark. This species is comparatively almost as elongated as *H. erraticus*, but the thorax is more

narrowed posteriorly, the lateral margin is narrower, and the elytra of the female are not toothed near the apex: the posterior angles of the thorax are slightly prominent, and almost rectangular.

Phileurus cribrus, ater, nitidus, convexus, clypeo marginato apice acute elevato, ante oculos transversim carinato, thorace transverso, parcius punctato, pone medium canaliculato, elytris punctis grossis seriatim positis. Long. .52.

Laredo to Ringgold Barracks; Mr. Weise. This curious little species seems to have most affinity with those of Burmeister's division (*β* (2));* the anterior tibiæ have three large external teeth, the mandibles are without any prominent external tooth, and the elytra without any short series of punctures near the scutellum. It differs, however, from all those described by Burmeister in having in place of the two usual frontal tubercles a transverse ridge, scarcely emarginate at the middle. The prosternal prominence is small, acute and densely pilose.

At Vallecitas, in California, I found the elytra and thorax of a species which seems on comparison very similar to the specimen found by Mr. Weise, but belongs to a section of the genus having a short stria at the base of the elytra, between the first and second stria: the punctures of the elytra are more closely set, so as to form striæ; the thorax is more densely punctured anteriorly, and almost smooth posteriorly: the dorsal channel extends almost to the apex, but is not deep, and finally the anterior tibiæ above the three long teeth have an indistinct prominence representing a fourth tooth. The length was about .65 of an inch. The species may be called *P. illatus*.

Athyreus serratus, ferrugineus, nitidus, clypeo antice truncato elevato, vertice transversim elevato, thorace lateribus rotundatis serrulatis, antice valde declivi, et medio late impresso, carinis utrinque duabus obliquis munito, apice valde marginato, elytris tenuiter striato-punctatis, antennis flavis. Long. .54.

One specimen, Laredo to Ringgold Barracks. The head is finely scabrous; the clypeus is truncate and perpendicular at the apex, which forms a subtriangular facet; each side above the eye commences an elevated line, which runs forward to the angle of the lateral emargination of the clypeus, then in a curve runs to the apex, where it unites with the elevated edge of the triangular facet above mentioned: the vertical horn is very short and transverse. The thorax is sparsely punctulate, with a few large punctures along the middle, and in the concavities: each side at the middle is a broad transverse sulcus, limited anteriorly by an elevated line; anterior to this the disc is very declivous, with the anterior margin strongly elevated; at the middle of this declivous face is a shallow impression, and again each side a deeper excavation, between which and the first mentioned elevated line is a strong somewhat oblique elevated ridge: the sides are regularly rounded and serrate, the anterior angles are acute. The striæ of the elytra are fine and moderately punctured; the interstices are very sparsely punctulate. The under surface and the legs are furnished with long yellow hairs.

Although this is the first authentic appearance of the genus *Athyreus* in our fauna, I find on comparison that *Bolbocerus fossatus* Hald. (Proc. Acad. 6, 362,) and *Scarabæus ferrugineus* Beauv. (Ins. 90, tab. 2b, fig. 3,) also belong here; the middle coxæ in both of those species are separated, and the mesosternum is somewhat elevated, acutely margined at the sides and declivous anteriorly. In his beautiful monograph of *Athyreus*, Klug suggests that the species of Beauvois just mentioned belongs to this genus, although in the absence of specimens for examination, this opinion could not be confirmed.

Anomala luteipennis, ovata nigra virescens, nitida, supra glabra, thorace lateribus rotundato, sat dense punctato, capite densius rugoso, postice punctato, elytris luteis, striis punctatis sutura epipleurisque anguste nigricantibus, pygidio parcius sat grosse punctato antennis testaceis. Long. .47—.52.

Laredo to Ringgold Barracks, Mr. Schott. One specimen has a small black

* *Lamellicornia*, 3, 151.

spot on each elytron on the first smooth interstice about the middle: the mesosternum is not prominent: the club of the antennæ in all the specimens is as long as the remaining portion. A nearly allied species from Wisconsin, given me by Mr. Guex, may be thus described.

A. marginella, ovata nigra virescens, nitida supra glabra, capite densius rugoso, postice punctato, thorace lateribus subangulato, punctato, elytris pallide testaceis, striis punctatis, sutura, margine, lineola humerali, guttaque utrinque dorsali ad medium nigris, pygidio confertim subtiliter rugoso, opaco, antennis testaceis, (lamella ♂ longiore). Long. .4—45.

Helichus æqualis, fuscus. æqualiter pubescens, subtiliter punctatus, thorace latitudine longiore, lateribus vix rotundatis, fere parallelis: elytris vix obsolete striatis. Long. .18.

One specimen, Frontera (Rio Grande), Mr. Clark. This species differs from *H. lithophilus*, by the thorax being longer, and scarcely narrowed anteriorly, and by the fine punctures of thorax and elytra being very distinct: the striæ of the latter can hardly be traced. Its characters approach most closely to *H. Gilensis Lec.* (Pro. Acad. 6, 43), a species of a broader form, and with very distinct lines of punctures upon the elytra.

Cymatodera balteata, testacea, parce pilosa, capite thoraceque dense punctatis fusco-piceis, hoc latitudine fere duplo longiore, subcylindrico, postice subangustato antice transversim impresso, lateribus subsinuatis, elytris punctis quadratis magnis seriatis postice minoribus, interstitiis parce punctatis; gutta utrinque ad quadrantem, fascia lata pone medium, alteraque angustissima subapicali nigro-piceis, antennis capite thoraceque vix longioribus fusco-testaceis. Long. .41.

One specimen, Laredo to Ringgold Barracks, Mr. Schott. The general form and appearance is that of *C. undulata*, but the thorax is not constricted posteriorly and is less sinuate on the sides, and the punctures of the elytra are much larger.

Cymatodera cancellata, fusco-picea, parce pubescens, capite thoraceque dense punctulatis, hoc latitudine sesqui longiore, pone medium subito fere duplo angustiore, ante medium transversim impresso, lateribus antice parallelis, postice sinuatis, elytris punctis magnis quadratis seriatis postice vix minoribus, interstitiis angustis parce punctulatis, antennis capite thoraceque paulo longioribus, extrorsum paulo incrassatis, articulis turbinatis, ultimo longiore cylindrico. Long. .38.

One specimen found with the preceding. Remarkable for the strange form of the antennæ, and for the sudden narrowing of the thorax behind the middle: there is however, no posterior transverse impression, except the constriction in the sides: the middle of the base is slightly elevated and marked with an oblong fovea. It is closely related to *C. brunnea Mels.*, but is smaller, with the thorax much more narrowed behind.

Elaphidion teniatum, fusco-piceum, tenuiter fusco-pubescens, thorace latitudine vix brevior, lateribus rotundato, dense punctato, callis dorsalibus minus distinctis, punctoque laterali albo notato, elytris thorace paulo latioribus, antice grossius punctatis macula parva basali, alteraque transversa irregulari ad medium albo-pubescentibus, apice truncato, breviter bispinoso: antennis (♀) corpore brevioribus, articulis 3—6 apice breviter unispinosis. Long. .95.

One specimen, Mr. Schott. In form resembles *E. atomarium*, but is not quite so robust: the thorax is scabrous with large punctures, the dorsal callosities are, as usual, three in number, one medial elongated, the others each side in front of the middle. The head around and between the eyes is densely pubescent with whitish hair: the elytra are moderately shining, the punctures are not very dense and become very small towards the apex. The thighs are not armed.

Elaphidion tene, nigro-piceum, valde elongatum, lineare, æqualiter longius cinereo pilosum, thorace subcylindrico, latitudine fere sesqui longiore, lateribus parum rotundato, sat dense punctato, callo elongato dorsali notato, elytris punc-

tatis, punctis postice subtilioribus, apice emarginatis at vix armatis, antennarum articulo 3io spina longissima armato. Long. .56—.65.

Laredo to Ringgold Barracks, Mr. Schott. Remarkable for its very slender form, in which it almost equals *E. unicolor*, (*Stenoc. unicolor* Randall): the fourth joint of the antennæ is armed with a very minute spine: the following joints are unarmed, as are the femora: the spine of the third joint extends two-thirds the length of the fourth joint. The elytra are truncate at tip, but the truncate part is slightly emarginate, in such manner that the angles become a little prominent. The antennæ of the male are longer, those of the female shorter than the body.

Oncideres pustulatus, niger, pube brevi fusca dense vestitus, thorace brevissimo, spina laterali acuta armato, lineaque transversa subundulata denudata ornato, elytris guttis sparsis denudatis nitidis, versus humeros tuberculiformibus ornatis. Long. .75.

Laredo, Mr. Schott. The anterior spots of the elytra are elevated, those behind the middle are flat.

Aedilis spectabilis, niger, subtiliter dense cinereo-fuscoque pubescens, thorace fusco maculis albis confluentibus utrinque ornatis, elytris basi fasciisque tribus undulatis obliquis fuscis (intermedia latiore), pedibus fusco annulatis, antennis longissimis cinereis, articulis 1—5 apice fuscis, 5to fasciculo apicali interno recurvato ornato. Long. .91.

Fort Union, Major Sibley. The first five joints of the antennæ are densely clothed beneath with fine short erect hair: the apex of the fourth joint is hardly thickened, but at the apex of the fifth joint is an internal brush of long yellowish hairs, which are recurved, so as to form a hooked prominence. The form of the thorax in this species is quite different from *A. nodosus*, and is more similar to *Monohammus*, the spine being perpendicular, and the disc more cylindrical: it ought probably to form a new genus, but as the arrangement of the genera of *Longicorns* is still very unsatisfactory, it is needless for the present to separate species that are obviously allied.

ULOCÆTES Lec. (Cerambyci Lepturidæ.)

Caput deflexum, fronte quadrata, perpendiculari, pone oculos subito, at parum constrictum: oculi emarginati; antennæ inter oculos pone medium insertæ; palpi breves articulis turbinatis subæqualibus; antennæ corpore duplo breviores, articulis 3 et 4 coniunctis 4to æqualibus: thorax transversus lateribus et dorso acute tuberculatus, densissime pilosus; elytra abbreviata, scabra, apice subacute rotundata, humeris valde elevatis. Tarsi posteriores articulo 1mo sequentibus coniunctis æquali. Alæ abdomine longiores, rectæ.

1. *U. leoninus*, niger, capite griseo-pubescente, thorace antrorsum angustato densissime longe griseo-piloso, antice valde transversim impresso, postice paulo constricto, elytris epacis apice late testaceis, tibiis testaceis, apice nigris; antennis basi obscure testaceis, alis fuliginosis. Long. .96; lat. .35.

Prairie Paso, Oregon, Dr. Cooper. This very fine insect seems allied to *Necydalis*; it differs, however, by its less constricted neck, and by the proportions of the joints of the antennæ, also by its stouter form: the elytra diverge more posteriorly, showing a tendency towards a subulate form. The scutel is smooth and shining, with the sides hairy: the pectus is thinly clothed with grayish hairs.

Mallosod serulatus, piceo-niger, nitidus capite antice parcius, pone oculos denius punctato, genis subacutis, thorace transverso, lateribus scabro et inæquali disco subtilius parce punctato, antrorsum subangustato, lateribus rectis serrulatis, versus angulos posticos paulo reflexis, elytris disperse subtilius punctatis. Long. 2.3.

Laredo to Ringgold Barracks, Mr. Weise. Resembles closely *M. cilipes* Hald., but the sides of the thorax are less serrate, and less reflexed: the disc is also less convex, the mandibles are not elongated, but thick, and emarginate at the end; those of the male of *M. cilipes* are similar in form.

Buprestis sphenicus, nigro-æneus, elongatus convexus breuissime parce pubescens, capite thoraceque punctis inauratis, hoc latitudine sesqui brevior, antice paulo angustato lateribus late rotundatis, basi media late rotundata utrinque sinuata, angulis posticis acutis, elytris a basi angustatis postice subacutis et serrulatis, subtiliter striato-punctatis, interstitiis parce punctatis, basi flavo pilosis, abdomine lateribus maculis triangularibus flavo-pilosis ornato. Long. .75—1.0.

Laredo to Ringgold Barracks. Mr. Schott. The arrangement of Buprestidæ is at present in such confusion, that I am unable, by the books, to determine the proper reference of this species. Generic characters of much importance in this family have been lost sight of in the arrangements proposed, and a thorough revision is necessary. This particular species has for generic characters: clypeus broadly but regularly emarginate; the antennæ inserted under a strongly elevated line which runs obliquely towards the emargination of the clypeus; the labrum emarginate; the mentum rounded anteriorly; the scutel small, transverse and rounded; coxal plates much but gradually dilated internally: mesosternum divided, with the portions entirely connate with the metasternum: palpi almost cylindrical, with subequal joints: anus very slightly emarginate: tarsi with the joints 1—4 broadly lobed, the lobe of the fourth joint rounded: the basal joint of the posterior tarsi very little longer than the second: the mandible are thick, short and obtuse.

Buprestis ambienis, læte viridis, ænescens, elongatus minus convexus, capite valde rugoso et punctato, oculis mediocribus, thorace latitudine brevior punctato lateribus rotundatis, flavo-marginatis, basi fere recte truncata, fovea ad medium alteraque utrinque ad angulos notata, elytris basi conjunctim subemarginatis, humeris acutis, lateribus flavo-marginatis, parallelis a dodrante angustatis, apice truncatis, sat profunde striato-punctatis, interstitiis paulo convexis, parce punctulatis. Long. .68.

Frontera (Rio Grande), Mr. Clarke. Although having very much the form of *Anthaxia*, this species differs considerably in its generic characters; the antennæ palpi and feet are unfortunately wanting, but the following marks will enable the genus to be recognized:

The antennæ are near the eyes, (which are moderate in size) and are inserted on the front: behind the insertion is a deep fovea, at the bottom of which is a round shining tubercle* (as in *Dicerca*); the clypeus is very broadly emarginate in the arc of a circle, (labrum wanting); the mandibles are short, thick and obliquely truncate; the mentum is broad and rounded anteriorly; the mesosternum firmly connate with the metasternum; the posterior coxal plates with the posterior outline concave so as to form an internal tooth; anus not emarginate; scutel very small, subtriangular.

The yellow margin of the thorax is posteriorly separated from the disc by an impressed line: the yellow of the elytra is slightly dilated behind the humerus and again about the middle.

Phænops mirandus, niger, ænescens subtiliter dense punctulatus, capite guttis 5 politis, circulo positus, thorace guttis 4 anticis (intermediis maioribus) alteraque utrinque pone medium, lineaque dorsali postica nitidis lævigatis; elytris margine basique tenuiter rubris, lineisque flavis decussatis ornatis. Long. .65.

Fort Union, New Mexico, Major Sibley. This beautiful species is nearly of the same form as our common black *P. longipes*, but is less acute posteriorly: the yellow lines of the elytra are arranged so as to include the following spots: a large common triangular one at the scutel, separated from the base by the red margin; an elongated lateral spot extending from behind the humerus to two-fifths the length: a large common rhomboidal spot on the suture, extending from the second to the fourth fifth of the length: immediately opposite the external angle of the rhomboid, a small submarginal black dot; finally a large apical blotch; separated from the rhomboid by a narrow yellow line, and from the margin by the red marginal line above mentioned. The yellow stripes which bound the anterior faces of the rhomboid are considerably broader than the

* Is this an ocellus, or a tympanum?

others. The under surface is of a uniform black bronze color, and densely punctured.

Eusattus puberulus, inflatus niger, subopacus, parce breviter flavo-pubes-cens, elytris parcius punctatis, lineisque elevatis duabus obsolete notatis; tho-racis angulis posticis acutis modice productis, tibiis anticis extus usque ad medium serrulatis, apice valde productis. Long. .34.

Laredo to Ringgold Barracks, Mr. Weise. The sides of the thorax are strongly margined, and furnished with long hairs: the base and apex are ciliate as usual with short bristles: the disc is entirely without punctures: the slightly elevated lines of the elytra in one specimen can hardly be observed.

Asbolus? infaustus, parum convexus, niger, subnitidus, capite parce punctato, thorace latitudine sesqui brevior, lateribus rotundatis, postice breviter sinuatis, angulis anticis acutis, posticis rectis, basi truncata, parce in disco obsolete punctato, elytris ovalibus thorace paulo latioribus, postice valde decli-vibus, disco punctis, lateribus apiceque tuberculis subelevatis subseriatis notatis. Long. .83.

One specimen, Laredo to Ringgold Barracks, Mr. Weise. This species agrees in its characters very closely with the two California species described in the *Annals of the Lyceum of New York*, (5, 129) the mentum is however more flat-tened, slightly carinate at base, and impressed anteriorly; the antennæ are less slender, and the joints are more distant, and the last joint is not truncate, but oval and pointed, and but little smaller than the tenth joint. A close affinity to *Centrioptera* is also seen, but that genus has less produced prosternum, and the mentum is not emarginate.

Allacula socia, picea fusco-pubescent, thorace latitudine duplo brevior, parce punctato, antrorsum angustato, lateribus rotundato, angulis posticis fere rectis, elytris profunde striato-punctatis, interstitiis subconvexis, punctatis. Long. .45.

Laredo to Ringgold Barracks, Mr. Schott. Closely related to *A. punctulata Mels.*, but with a broader thorax: as in that species the eyes are large and moderately distant, the third joint of the antennæ equal to the fourth, and the penultimate joint of all the tarsi lobed.

Meloe sublevis, cyaneo-niger, fere opacus, capite thoraceque parce sub-lititer punctulatis, hoc quadrato, postice subangustato, angulis omnibus rotunda-tis, disco subdepresso, foveis duabus ante medium impresso, elytris subtiliter dædaleo-rugosis, antennis sensim paulo incrassatis. Long. .65.

Fort Union, New Mexico, Major Sibley. Probably a female: the antennæ are not filiform as in *M. angusticollis Say*, nor thicker in the middle as in *M. impressus Kirby*, but are very gradually thickened to the end: the third joint is not longer than the fourth, and is about twice the size of the second. The inner spur of the posterior tibiæ is acute, the outer one is larger, concave and obtuse. This species approaches the Western American *M. strigulosus Mann.*, but the thorax is not so much elongated, the sides are nearly straight, and the base less emarginate.

Lytta costata, valde elongata, nigra, dense cinereo-pubescent, capite linea nigra impressa, thorace latitudine sesqui longior, antrorsum angustato, lateribus late rotundato, linea nigra dorsali impressa, elytris sutura margine, costisque 4 elevatis ornatis, externa antice paulo abbreviatis, tarsis antennisque nigris. Long. .65.

One specimen, Frontera, (Rio Grande) Mr. Clark. The antennæ are slender and filiform: the first joint is equal in length to the third; the second is about one half as long; from the third the joints diminish gradually in length: the inner spur of the posterior tibiæ is acute, the outer one is broader, obtuse and concave. The labrum is slightly emarginate. It belongs in division (B—g.) of *Proc. Acad.* 6, 331.

Lytta luteicornis, nigra dense cinereo-pubescent, thorace latitudine longior lateribus antice rotundatis, disco lineolis duabus nigris sæpius ornato,

lateribus fere parallelis, elytris thorace fere duplo latoribus; tibiis apice tarsisque nigris, palpis, labro, clypeo, antennisque luteo-testaceis, his extrorsum obsecuris. Long. .85—95.

Laredo to Ringgold Barracks, Mr. Weise. In the male, the first joint of the antennæ is as long as the head, compressed, and angulated externally beyond the middle but very slightly curved: the second joint is one half larger than the third. In the female the first joint extends to the posterior margin of the eye, and the second joint is about equal to the third. This species is allied to *L. longicollis* Lec. but the color of the cephalic organs, and the sexual characters distinguish it at first sight.

Zonitis rufa, pallide rufa, breviter pubescens, capite modice, thorace parcius punctato, hoc latitudine fere longiore, nitido subcanaliculato, lateribus antice rotundatis, elytris dense rugose punctatis, pedibus ore antennisque nigris. Long. .27.

One specimen, Frontera, (Rio Grande) Mr. Clark. This species has very much the appearance of a small *Nemognatha*, but the maxillæ are not elongated: the spurs of the posterior tibiæ are broad, the outer one obtuse, the inner one subacute. The second joint of the antennæ is two-thirds as large as the third.

Tanymecus lautus, niger, parcius cinereo-squamulosus, capite punctato canaliculato, thorace latitudine sesqui brevior, lateribus parallelis apice rotundatis, parcius grosse punctato, disco subcanaliculato, postice fovea lata excavato, elytris thorace latoribus humeris obtuse angulatis, apice valde declivi, punctis seriatim mausculis impressis, interstitiis alutaceis. Long. .46.

One specimen, Frontera, (Rio Grande) Mr. Clark. The largest species I have seen within our Territories.

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Notice of a new species of Salmonidæ, from the north-eastern part of the United States.

By CHARLES GIRARD.

The body of the male is subfusiform and rather slender, particularly the caudal region; the head being regularly subconical and contained five times in the total length. The maxillaries are gently curved, extending backwards to about the posterior margin of the orbit. The female is stouter, with the peduncle of the tail shorter; the head has the same general shape, but is not contained five times in the total length. The maxillaries are less curved, but extend as far backwards as in the male. The eye is very large; its diameter being contained nearly five times in the length of side of head. The caudal is deeply emarginated posteriorly, giving to it a more forked appearance than in either *Salmo oquassa* or *Salmo sebago*. The adipose fin, in the male, is situated opposite the anterior margin of the anal, whilst in the female it corresponds to the posterior margin of the same fin.

The scales are well developed, being somewhat smaller, however, than in *Salmo sebago*, and considerably larger than in either *Salmo oquassa* or *Salmo erythrogaster*. On the dorsal and ventral regions they are considerably smaller than upon the sides and along the peduncle of the tail. They extend, diminishing in size, over nearly the half of the length of the middle rays of the caudal fin. The lateral line takes an almost straight course along the middle region of the flanks. The following is an approximate formula of the rays of the fins:

D 2. 12. A 1. 9. C 8. I. 8. 9. L 5. V 1. 9. P 14.

There are two anterior rudimentary rays to the dorsal, one or two to the anal, one to the ventrals, eight or ten to the upper lobe of the caudal, and five or six to the inferior lobe.

The upper surface of head and dorsal region are blackish brown; the sides are silvery white, and the belly yellowish. The region above the lateral line is densely spread all over with black irregular spots, some of which are confluent; a few scattered ones may be seen beneath that line upon the middle of the abdomen. Four to six of these spots, well defined, are always observed on the oper-